ENGLAND GCSE MATHS AQA HIGHER · UNIT 8 · 25 QUESTIONS

Proportion, Rates of Change, Growth and Decay — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button so it can be fixed.

1 **A rocket travels 2700 km in 3 hours. Its average speed is**

- A 800
- B 1800
- C 1000
- D 900

Understand It with Pulse | Flag a mistake

2 **A red race car worth £20000 loses 10% of its value each year. How much is it worth after one year?**

- A £19800
- B £18000
- C £19000
- D £2000

Understand It with Pulse | Flag a mistake

3 **Water flows into a swimming pool at 10 litres per minute. How long does it take to fill 200 litres?**

- A 40
- B 20
- C 30
- D 10

Understand It with Pulse | Flag a mistake

4 **A yellow school bus travels 210 km in 3 hours. Its average speed, in km/h, is**

- A 80
- B 630
- C 35
- D 70

Understand It with Pulse | Flag a mistake

5 **A bicycle travels 36 km in 3 hours. Its average speed is**

- A 7
- B 24
- C 12
- D 17

Understand It with Pulse | Flag a mistake

6 **A passenger aeroplane travels 900 km in 3 hours. Its average speed is**

- A 400
- B 600
- C 300
- D 200

Understand It with Pulse | Flag a mistake

7 **On a distance-time graph, a car travels 60 km in 2 hours at a steady speed. The speed of the car, in km/h, is**

- A 30
- B 120
- C 58
- D 60

Understand It with Pulse | Flag a mistake

8 **y is inversely proportional to x and y = 6 when x = 4. Find y when x = 8.**

A 192

B 9

C 3

D 12

Understand It with Pulse | Flag a mistake

9 **A block has mass 480 g and volume 80 cm³. Its density, in g/cm³, is**

A 38400

B 8

C 6

D 240

Understand It with Pulse | Flag a mistake

10 A population of 500 grows by 3% each year. After 3 years the population is about

- A 596
- B 1000
- C 546
- D 545

Understand It with Pulse | Flag a mistake

11 A force of 360 N acts on an area of 4 m^2. The pressure, in $\frac{N}{m^2}$, is

- A 1440
- B 90
- C 180
- D 95

Understand It with Pulse | Flag a mistake

12 **y is directly proportional to x and y = 6 when x = 2. Find y when x = 9.**

- A 27
- B 30
- C 12
- D 54

Understand It with Pulse | Flag a mistake

13 **A passenger train travels 180 km in 1.5 hours. Its average speed, in km/h, is**

- A 270
- B 120
- C 130
- D 60

Understand It with Pulse | Flag a mistake

14 **Convert 108 km/h into $\frac{m}{s}$**

A 30

B 35

C 388.8

D 60

Understand It with Pulse | Flag a mistake

15 **Money of £2000 is invested at 4% compound interest per year. How much is it worth after 2 years?**

A £2160

B £2080

C £2213.20

D £2163.20

Understand It with Pulse | Flag a mistake

16 **y is inversely proportional to x^2 and y = 24 when x = 1. Find y when x = 3.**

A 8

B 2

C 72

D 26

Understand It with Pulse | Flag a mistake

17 **On a distance-time graph, a car travels 120 km in 4 hours at a steady speed. The speed of the car, in km/h, is**

A 60

B 480

C 116

D 30

Understand It with Pulse | Flag a mistake

18 **y is inversely proportional to x and y = 12 when x = 2. Find y when x = 6.**

- A 4
- B 16
- C 144
- D 36

Understand It with Pulse | Flag a mistake

19 **A block has mass 360 g and volume 80 cm³. Its density, in g/cm³, is**

- A 4
- B 6
- C 180
- D 28800

Understand It with Pulse | Flag a mistake

20 A force of 200 N acts on an area of 4 m^2. The pressure, in $\frac{N}{m^2}$, is

- A 55
- B 50
- C 100
- D 800

Understand It with Pulse | Flag a mistake

21 y is directly proportional to x and y = 8 when x = 2. Find y when x = 8.

- A 64
- B 32
- C 12
- D 36

Understand It with Pulse | Flag a mistake

22 **Convert 72 km/h into $\frac{m}{s}$**

A 40

B 259.2

C 20

D 25

Understand It with Pulse | Flag a mistake

23 **y is inversely proportional to x^2 and y = 18 when x = 1. Find y when x = 2.**

A 22

B 9

C 36

D 4

Understand It with Pulse | Flag a mistake

24 **On a distance-time graph, a car travels 60 km in 3 hours at a steady speed. The speed of the car, in km/h, is**

- A 180
- B 20
- C 57
- D 40

Understand It with Pulse | Flag a mistake

25 **y is inversely proportional to x and y = 6 when x = 4. Find y when x = 3.**

- A 8
- B 72
- C 4
- D 14

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	D	**10.**	C	**19.**	A
2.	B	**11.**	B	**20.**	B
3.	B	**12.**	A	**21.**	B
4.	D	**13.**	B	**22.**	C
5.	C	**14.**	A	**23.**	D
6.	C	**15.**	D	**24.**	B
7.	A	**16.**	B	**25.**	A
8.	C	**17.**	D		
9.	C	**18.**	A		

© 2026 Brett Robbins. All Rights Reserved.